SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name of the substance	Dimer Fatty Acid
Trade name of the substance	UNIDYME™ M15
Identification number	500-148-0 (EC number)
Registration number	01-2119493908-18-0002
Synonyms	None.
SDS number	9164
Product code	200000000789
Issue date	16-January-2017
Version number	3,0
Revision date	29-September-2022
Supersedes date	18-September-2017

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Industrial uses: Uses of substances as such or in preparations at industrial sites. Formulation [mixing] of preparations and/or re-packaging (excluding alloys).
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Company name	Kraton Chemical B.V.
Address	Transistorstraat 16, 1322 CE Almere, The Netherlands
Phone	+31 36 546 2800
Email address	regulatory.eu@kraton.com

1.4. Emergency telephone number	EU NCEC +44 1865 407 333

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary	After prolonged contact with highly porous materials, this product may spontaneously combust.

2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains:	Dimer Fatty Acid
Hazard pictograms	None.
Signal word	None.
Hazard statements	The substance does not meet the criteria for classification.

Precautionary statements

Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	Dispose of waste and residues in accordance with local authority requirements.

Supplemental label information	None.
2.3. Other hazards	After prolonged contact with highly porous materials, this product may spontaneously combust. This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII. The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
Dimer Fatty Acid	100	61788-89-4 500-148-0	01-2119493908-18-0001 01-2119493908-18-0002	-	
Classification: -					

List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.
DSD: Directive 67/548/EEC.
M: M-factor
vPvB: very persistent and very bioaccumulative substance.
PBT: persistent, bioaccumulative and toxic substance.

SECTION 4: First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed Exposure may cause temporary irritation, redness, or discomfort.

4.3. Indication of any immediate medical attention and special treatment needed Treat symptomatically.

SECTION 5: Firefighting measures

General fire hazards Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.

5.1. Extinguishing media

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture During fire, gases hazardous to health may be formed. Upon decomposition, this product emits carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

5.3. Advice for firefighters

Special protective equipment for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Special fire fighting procedures Wear suitable protective equipment. Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel Wear appropriate personal protective equipment.

For emergency responders Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

6.2. Environmental precautions Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water.

Small Spills: Absorb in vermiculite, dry sand or earth and place into containers. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use.

6.4. Reference to other sections For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material. May auto-oxidize with sufficient heat generation to ignite if spread (as a thin film) or absorbed on porous or fibrous material. Contaminated rags and cloths must be put in fireproof containers for disposal. Avoid release to the environment. Observe good industrial hygiene practices. Follow all SDS/label precautions even after container is emptied because they may retain product residues.

7.2. Conditions for safe storage, including any incompatibilities

Do not store in direct sunlight. Store in original tightly closed container. Keep containers closed when not in use. Store at ambient temperature and atmospheric pressure. Store away from incompatible materials (see Section 10 of the SDS).

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

No exposure limits noted for ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no effect levels (DNELs)

General Population

Components	Value	Assessment factor	Notes
Dimer Fatty Acid (CAS 61788-89-4)			
Long-term, Systemic, Dermal	370,5 mg/kg bw/day	2	Repeated dose toxicity
Long-term, Systemic, Inhalation	12,887 mg/m3	50	Repeated dose toxicity
Long-term, Systemic, Oral	3,705 mg/kg bw/day	200	Repeated dose toxicity

Workers

Components	Value	Assessment factor	Notes
Dimer Fatty Acid (CAS 61788-89-4)			
Long-term, Systemic, Dermal	741 mg/kg bw/day	1	Repeated dose toxicity
Long-term, Systemic, Inhalation	52,26 mg/m3	25	Repeated dose toxicity

Predicted no effect concentrations (PNECs)

Components	Value	Assessment factor	Notes
Dimer Fatty Acid (CAS 61788-89-4)			
Soil	10 mg/kg	100	

8.2. Exposure controls

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

General information

Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

- Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

- Other

Wear suitable protective clothing.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

Hygiene measures

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Eye wash fountain and emergency showers are recommended.

Environmental exposure controls

Environmental manager must be informed of all major releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid.

Form

Viscous liquid

Colour

Amber.

Odour	Mild.
Melting point/freezing point	-12 - -18 °C (10,4 - -0,4 °F)
Boiling point or initial boiling point and boiling range	> 200 °C (> 392 °F)
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Flash point	260,0 °C (500,0 °F) Cleveland open cup
Auto-ignition temperature	263 °C (505,4 °F) Data is for similar product.
Decomposition temperature	Not available.
pH	Not available.
Solubility(ies)	
Solubility (water)	< 0,12 mg/l at 20ºC; Data is for similar product.
Partition coefficient (n-octanol/water)	> 5
Vapour pressure	< 0,0000001 kPa at 25°C
Vapour density	Not available.
Relative density	0,95 at 25°C/25°C; (water=1)
Particle characteristics	Not available.
Other safety characteristics	
Chemical family	Dimer Fatty Acid
Density	950,00 kg/m3 at 20°C
Evaporation rate	0 (n-BuAc=1) estimated
Percent volatile	0 % estimated
Surface tension	33,3 mN/m at 24°C
Viscosity	1827 - 2255 mPa·s at 40°C

SECTION 10: Stability and reactivity

10.1. Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
10.2. Chemical stability	Material is stable under normal conditions.
10.3. Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
10.4. Conditions to avoid	Strong oxidising agents. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.
10.5. Incompatible materials	Strong oxidising agents.
10.6. Hazardous decomposition products	Upon decomposition this product emits acrid dense smoke with carbon dioxide, carbon monoxide, water and other products of combustion.

SECTION 11: Toxicological information

General information No data on possible toxicity effects have been found.

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Dimer Fatty Acid	Irritation Corrosion - Eye, No eye irritation. Result: Negative Species: New Zealand white rabbit Organ: Eye Notes: OECD 405
Ingestion	Expected to be a low ingestion hazard.

Symptoms Exposure may cause temporary irritation, redness, or discomfort.

11.1. Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test Results
Dimer Fatty Acid (CAS 61788-89-4)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg
	Wistar rat	> 5000 mg/kg At this dose no death occurred.; OECD 401
Chronic		
Oral		
NOAEL	Sprague-Dawley rat	1692 mg/kg/day Developmental; OECD 421
		1450 mg/kg/day Fertility; OECD 421
Subchronic		
Oral		
NOAEL	Sprague-Dawley rat	741 mg/kg/day, 13 weeks OECD 408

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Corrosivity

Dimer Fatty Acid

Irritation Corrosion - Skin, No skin irritation.
Result: Negative
Species: New Zealand white rabbit
Organ: Skin
Notes: OECD 404

Serious eye damage/eye irritation Direct contact with eyes may cause temporary irritation.

Eye contact

Dimer Fatty Acid

Irritation Corrosion - Eye, No eye irritation.
Result: Negative
Species: New Zealand white rabbit
Organ: Eye
Notes: OECD 405

Respiratory sensitisation Not available.

Skin sensitisation This product is not expected to cause skin sensitisation.

Skin Sensitisation

Dimer Fatty Acid

Maximisation assay (Magnusson and Kligman), Not a skin sensitizer.; Data is for similar product.
Result: Negative
Species: Guinea pig
Notes: OECD 406

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are carcinogenic.

Mutagenicity

Dimer Fatty Acid

Germ Cell Mutagenicity: Ames, No data available to indicate product or any components present at greater than 0,1% are mutagenic or genotoxic.
Result: Negative
Species: Salmonella typhimurium
Notes: EU Method B 13/14
Germ Cell Mutagenicity: Chromosome Abberation
Result: Negative
Species: Human
Notes: OECD 473
In vitro gene mutation study in mammalian cells, This material is considered to be non-clastogenic to human lymphocytes in vitro.
Result: Negative
Species: Mouse
Notes: OECD 476

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Mixture versus substance information	No information available.

11.2. Information on other hazards

Endocrine disrupting properties	The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
Other information	Not available.

SECTION 12: Ecological information

12.1. Toxicity The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test Results
Dimer Fatty Acid (CAS 61788-89-4)			
	EL50	Algae (Pseudokirchneriella subcapitata)	> 1000 mg/l, 72 hr OECD 201
	NOEL	Algae (Pseudokirchneriella subcapitata)	> 1000 mg/l, 72 hr OECD 201
Aquatic			
Crustacea	EL50	Daphnia	> 1000 mg/l, 48 hr OECD 202
	NOEL	Daphnia	> 1000 mg/l, 48 hr OECD 202
Fish	LC50	Carp (Cyprinus carpio)	> 350 mg/l, 96 hr OECD 203
	NOEC	Danio (Danio)	850 µg/l, 28 d Data is for similar product.; ISO/DIS 10229-1

* Estimates for product may be based on additional component data not shown.

12.2. Persistence and degradability The product is not readily biodegradable.

Biodegradability

Percent Degradation (Aerobic Biodegradation)

Dimer Fatty Acid	7,1 % CO_2 Evolution Test, Not readily biodegradable. Species: Activated sewage sludge Test Duration: 28 d

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water (log Kow)

UNIDYME™ M15	> 5 LogKow
Dimer Fatty Acid	> 5 1 - 2,5, pH2

12.4. Mobility in soil	No data available.
12.5. Results of PBT and vPvB assessment	This mixture does not contain substances assessed to be vPvB / PBT according to Regulation (EC) No 1907/2006, Annex XIII.
12.6. Endocrine disrupting properties	The product does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
12.7. Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EU waste code	The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Disposal methods/information	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Special precautions	Dispose in accordance with all applicable regulations.

SECTION 14: Transport information

ADR

14.1. UN number	Not available.
14.2. UN proper shipping name	Not available.
14.3. Transport hazard class(es)	
Class	Not available.
Subsidiary risk	-
Hazard No. (ADR)	Not available.
Tunnel restriction code	Not available.
14.4. Packing group	Not available.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

RID

14.1. UN number	Not available.
14.2. UN proper shipping name	Not available.
14.3. Transport hazard class(es)	
Class	Not available.
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

ADN

14.1. UN number	Not available.
14.2. UN proper shipping name	Not available.
14.3. Transport hazard class(es)	
Class	Not available.
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

IATA

14.1. UN number	Not available.
14.2. UN proper shipping name	Not available.
14.3. Transport hazard class(es)	
Class	Not available.
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	No.
14.6. Special precautions for user	Not available.

IMDG

14.1. UN number	Not available.
14.2. UN proper shipping name	Not available.
14.3. Transport hazard class(es)	
Class	Not available.
Subsidiary risk	-
14.4. Packing group	Not available.
14.5. Environmental hazards	
Marine pollutant	No.
EmS	Not available.
14.6. Special precautions for user	Not available.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulations

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended

Not listed.

Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended

Not listed.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended

Not listed.

Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended

Not listed.

Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA

Not listed.

Authorisations

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended

Not listed.

Restrictions on use

Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended

Not listed.

Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.

Not listed.

Other EU regulations

Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended

Not listed.

Other regulations	The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.
National regulations	Follow national regulation for work with chemical agents.
15.2. Chemical safety assessment	Chemical Safety Assessment has been carried out.
Water hazard class	
AwSV	WGK1

SECTION 16: Other information

List of abbreviations	Not available.
References	Not available.
Information on evaluation method leading to the classification of mixture	The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.
Full text of any H-statements not written out in full under Sections 2 to 15	None.
Revision information	SECTION 2: Hazards identification: 2,3. Other hazards SECTION 8: Exposure controls/personal protection: Environmental exposure controls SECTION 11: Toxicological information: Endocrine disrupting properties SECTION 12: Ecological information: 12,6. Endocrine disrupting properties SECTION 12: Ecological information: 12,5. Results of PBT and vPvB assessment SECTION 16: Other information: Disclaimer
Training information	Follow training instructions when handling this material.

Disclaimer

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